



CTC Laboratories, Inc.



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CNAS L5365

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TEST REPORT

Report No.: CTC20230973E08

Applicant: Lumi United Technology Co., Ltd

Address.....: Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China

Manufacturer.....: Lumi United Technology Co., Ltd

Address.....: Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China

Product Name: Water Leak Sensor T1

Trade Mark: Aqara

Model/Type reference.....: WLS-S01

Listed Model(s): SJCGQ12LM, SJCGQ12LM-G0, WL-S02D

Standard: EN 62479: 2010

BS EN 62479: 2010

Date of receipt of test sample....: Apr. 21, 2023

Date of testing.....: Apr. 22, 2023 ~ Apr. 28, 2023

Date of issue.....: Apr. 29, 2023

Result.....: PASS

Compiled by:

(Printed name+signature) Terry Su

Supervised by:

(Printed name+signature) Eric Zhang

Approved by:

(Printed name+signature) Totti Zhao

Testing Laboratory Name: CTC Laboratories, Inc.

Address.....: 2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

[EN 62479: 2010](#) – Assessment of the compliance of low-power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)

[BS EN 62479: 2010](#) – Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)

1.2. Report version

| Revised No. | Date of issue | Description |
|-------------|---------------|-------------|
| 01 | Apr. 29, 2023 | Original |
| | | |
| | | |
| | | |

1.3. Test Facility

CTC Laboratories, Inc.

Add: 2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.



2. GENERAL INFORMATION

2.1. Client Information

| | |
|---------------|--|
| Applicant: | Lumi United Technology Co., Ltd |
| Address: | Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China |
| Manufacturer: | Lumi United Technology Co., Ltd |
| Address: | Room 801-804, Building 1, Chongwen Park, Nanshan iPark, No. 3370, Liuxian Avenue, Fuguang Community, Taoyuan Residential District, Nanshan District, Shenzhen, China |

2.2. General Description of EUT

| | |
|-----------------------|--|
| Product Name: | Water Leak Sensor T1 |
| Trade Mark: | Aqara |
| Model/Type reference: | WLS-S01 |
| Listed Model(s): | SJCGQ12LM, SJCGQ12LM-G0, WL-S02D |
| Model Difference: | All these models are identical in the same PCB, layout and electrical circuit, only named differently for marketing purpose. |
| Power supply: | 3Vdc from button battery |
| Hardware version: | V1.0.1 |
| Software version: | V1.0.1 |
| Antenna type: | PCB Antenna |
| Antenna gain: | 2dBi |
| Zigbee | |
| Modulation: | O-QPSK |
| Operation frequency: | 2405-2480MHz |
| Channel number: | 16 |
| Channel separation: | 5 MHz |

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3. TEST ITEM AND RESULTS

3.1. RF Exposure

Limit

20mW (According to the table A.1)

Table A.1 – Example values of SAR-based P_{max} for some cases described by ICNIRP, IEEE Std C95.1-1999 and IEEE Std C95.1-2005

| Guideline / Standard | SAR limit, SAR_{max} W/kg | Averaging mass, m g | P_{max} mW | Exposure tier ^a | Region of body ^a |
|-------------------------|-----------------------------|---------------------|--------------|----------------------------|------------------------------------|
| ICNIRP [1] | 2 | 10 | 20 | General public | Head and trunk |
| | 4 | 10 | 40 | General public | Limbs |
| | 10 | 10 | 100 | Occupational | Head and trunk |
| | 20 | 10 | 200 | Occupational | Limbs |
| IEEE Std C95.1-1999 [2] | 1.6 | 1 | 1.6 | Uncontrolled environment | Head, trunk, arms, legs |
| | 4 | 10 | 40 | Uncontrolled environment | Hands, wrists, feet and ankles |
| | 8 | 1 | 8 | Controlled environment | Head, trunk, arms, legs |
| | 20 | 10 | 200 | Controlled environment | Hands, wrists, feet and ankles |
| IEEE Std C95.1-2005 [3] | 2 | 10 | 20 | Action level | Body except extremities and pinnae |
| | 4 | 10 | 40 | Action level | Extremities and pinnae |
| | 10 | 10 | 100 | Controlled environment | Body except extremities and pinnae |
| | 20 | 10 | 200 | Controlled environment | Extremities and pinnae |

^a Consult the appropriate standard for more information and definitions of terms.



Test Results

| Type | Test frequency | EIRP (dBm) | Output power (mW) | Limit (mW) | Results |
|--------|----------------|------------|-------------------|------------|---------|
| Zigbee | 2405MHz | 11.67 | 14.68 | 20.00 | Pass |
| | 2440MHz | 11.70 | 14.79 | | |
| | 2480MHz | 11.48 | 14.06 | | |

Note: For a more detailed features description, please refer to the RF Test Report.

*****THE END*****